

CALIFORNIA STATE DIVISION OF FORESTRY
Department of Natural Resources

"T H E N . . .

and

NOW . . ."

By Estelle J. Baxter, Editor
Forestry News Letter

"Only God can make a tree."

--Joyce Kilmer

"Hurt not the earth nor the trees."

--Revelations

THEN. . .and N O W. . . .

California has long been endowed with all the gifts a bountiful Nature could bestow -- mountains, lakes, ocean, desert, fertile valleys, enormous stores of mineral wealth. Among her more precious adornments are her watersheds, guardians of the life stream of the people, and her vast forests containing a great variety of trees, large and small.

The progress made in protecting this heritage of forest lands has been marked with political intrigue, blundering early-day officials and hard, back-breaking--often heart-breaking--work.

While men haggled over dollars, irreplaceable watersheds and forests were being swept by fire. It was not until the population of California finally realized their golden empire could be a little less than a fountain of never-ending wealth, that the riches bestowed upon them in the way of forest and watershed lands could vanish in the smoke of the fires they disregarded, was anything done to correct what was fast becoming a deplorable situation.

Early day Californians often were activated by excellent intentions, but too often politicians made merry with those worthwhile motives and what began auspiciously ended in discard. Such was the fate of California's earliest attempt to establish control over her vast forest lands.

An act passed March 3, 1885 by the State Legislature created a State Board of Forestry, which acted in the capacity of a commission of inquiry. Primarily educational, its scope was limited by an appropriation of but \$5,000 for the biennium. Of this sum the secretary of the board received \$125 per month; balance was expended for the board's traveling expenses and employment of assistants.

Members of this first board were Abbott Kinney, James V. Coleman and A. Kellogg.

Two years later, on March 7, 1887, the legislature broadened the powers of the board by conferring upon it police powers and upping its biennial appropriation to \$30,000. The board was allowed to make arrests for violation of any law applying to forest and brush lands within California, prohibiting the destruction thereof.

In the board's second biennial report, to Governor Waterman, it stated its efforts were being directed to a reform in cutting public forests on mountain watersheds. Individuals had been indiscriminately cutting timber, without going through the formality of obtaining title, as required by law. So much of the timbered school lands had been taken up by lumber interests by May 1, 1888, there were no timber lands of value belonging to the schools in the State.

The second Board of Forestry, consisting of Abbott Kinney, John D. Spreckels and Walters S. Moore, stated:

"Every day's delay makes proper forestry measures more expensive and more difficult. The condition of the nation in regard to forestry may be compared to the story of the Roman Republic and the Sibylline books. Each time these books of prophecy were offered to the Romans and refused, a certain number were destroyed. When they were at length purchased their price was enormous and the books were but a fractional part of what they had been. Thus it will be with forestry and forestry must come some day."

Stressing prevalence of forest fires, the third biennial report of the board, 1889-1890, advocated action on public lands by the Federal government. It declared California's lumber resources on the Sierra Nevada seemed boundless, but that in the redwood region the forests would exist, in theory, less than 40 years, if the ratio of increase in export trade was maintained. Establishment of two experimental forestation stations, one at Chico and the other at Santa Monica, for introduction and raising of tree stock, was announced.

At this point politics entered the forestry scene and a feud developed between then Governor Waterman, and one of the Forestry Commissioners, Senator F. J. Moffitt of Alameda. Ostensibly the best of friends, Waterman and Moffitt disagreed over legislative appointments. The final blow fell when Moffitt secured passage of a bill authorizing painting of a portrait of ex-Governor Bartlett, but allowed a similar bill for Waterman's portrait to die.

In retaliation for this seeming insult, Governor Waterman removed Moffitt from the Forestry Board, appointing Joaquin Miller, the poet, in his stead. Waterman privately gave as the reason for Moffitt's dismissal the fact that Moffitt had spoken disrespectfully of him and had passed a bill over his head.

Moffitt determined to fight his removal from the board and consulted with Congressman T. J. Clunie and Attorney George A. Knight. They informed him the Governor was entirely within his rights in his action. Joaquin Miller, in the meantime, ascertaining that all was not peaceful in the official family, declined the appointment as Forestry Commissioner. Then the Governor appointed a Mr. Plummer of Alameda "to succeed Joaquin Miller, who failed to qualify".

Other members of the Forestry Board at that time were John D. Spreckels (of sugar fame), and Walter S. Moore, a Los Angeles politician. These two decided to stick by Moffitt, ignoring the Governor's appointee, Plummer. Thus Moffitt continued to serve and Plummer was without standing on the board.

Later, the Governor won Moore over to his side of the fracas, thus favoring Plummer instead of Moffitt. Much bickering ensued and before the issue was settled the Governor moved his home to Oakland, living in a house adjoining that of Moffitt.

Here the feud was carried on in true backfence fashion. First Moffitt would make friendly overtures and the Governor would balk; then the Governor would express his wish for peaceful relations and Moffitt would remain obdurate.

Meanwhile Moffitt continued as a Forestry Commissioner. Spreckels was busy, with his business interests; Moore was in Los Angeles (then considered a great distance from the Capitol), and Moffitt had things very much to himself, running the State's forestry business as he chose, completely ignoring poor Plummer. The Governor, lacking political support to oust Moffitt, was forced to put up with this high-handed member of his administration.

Forestry matters still maintained a semblance of "business as usual" and the fourth biennial report, 1891-92, to Governor Markham, announced progress with Congress in preserving the forests in that the President, through the Secretary of the Interior, had withdrawn from entry and sale large tracts of timber land in the Sierra Nevada, establishing several reservations and national parks, which were patrolled and guarded by, cavalry troops.

A bill was drawn up providing for employment of firewardens at a fixed sum per day while actually employed in extinguishing fires, the wardens to be under supervision of county supervisors; but control to be in the hands of the State Board of Forestry. Apparently the bill did not reach the legislature, since the Board of Forestry was abolished in 1893.

The report of the Executive Officer of the Board, in the fourth biennial report, stated:

"It is not only impossible under existing conditions, to detect violators of the law, but it is futile to expect the officers of this Board to accomplish, with the means at their command, anything appreciable in the extinguishment of forest fires. An adequate force of forest guards, if appointed and paid by the State, would require the appropriation for salaries of a sum of money, the mere contemplation of which would appall the Legislature, and it is doubtful if a salaried patrol would do the work effectively.

". . .It is obvious, also, that the employment of salaried patrolmen, in sufficient numbers to insure adequate protection, would require very large annual appropriations--much larger than could be reasonably demanded of the Legislature. Having given this subject some attention and consideration, I take the liberty of suggesting to the Board a plan that seems to meet the requirements of the situation. In general

terms, the plan contemplates the appointment of firewardens in all townships where forest or brush fires may possibly occur, said wardens to be paid a fixed sum per day for their services while actually employed in extinguishing fires, their bills to be passed upon and paid by the supervisors of counties, and not paid out of the State Treasury. The wardens should be empowered to call upon any and all citizens for assistance in fighting fire, and refusal to respond to their call should be made a misdemeanor, punishable by fine. Supervisors of counties should be ex-officio fire wardens. These wardens should be under the control of the Board of Forestry, and should be required to report to this Board."

On January 3, 1893, at the 30th Session of the California State Legislature, Governor H. H. Markham included in his message to the legislature, the following:

"I urge each member of your honorable bodies to read the report of the State Board of Forestry, in which they speak at length of the utter futility of employing fire agents

to preserve the forests. They say that the number of agents which their appropriation has permitted them to employ is 'necessarily absurdly inadequate'.

"The executive officer of the Board, in his report, says that unless some more effective means are devised for preventing and extinguishing fires, not only forest preservation, but forest restoration, will confront the State, and that the sum necessary to employ an adequate force under the present system would appall the Legislature, and then it is doubtful if the work would be effective. Both he and the Board recommend that a law be enacted providing for fire wardens in each county, to be appointed by the Board of Supervisors, who shall be paid by the day for the time they are actually employed, and who shall have power to call upon the citizens for assistance in fighting fires, etc. There is certainly no doubt in the mind of anyone that we should devise some means, if possible, to preserve our forests, as many of our great industries depend upon a constant and abundant water supply. To insure this, the timber which shades and

protects the source of supply and equalizes the flow of water during the winter must be preserved.

"Whether the system suggested by the honorable board is a feasible one, is a question that you must decide. But whether you adopt this plan or not, it is evident from their report that an appropriation for fire agents to be employed by the present board is a waste of money. The executive officer of the board, in a written report made at the request of one of the members of the board, which report is now on file with the State Board of Examiners, among other things says that he has 'never seen nor heard of a fire agent except through the medium of their salary bills', and he is satisfied that 'some of them have put in bills for months where they were not even nominally rendering any service to the State'. He further says, 'The fire agents are utterly inefficient, and I advise the immediate discharge of every one of them', which I may add, the Board did. If in your wisdom you should adopt the plan suggested by the Board, or should provide some other method of endeavoring to preserve our forests from the ravages of fire, I then see no good

reason for continuing the existence of the Board of Forestry, as the experiment stations can be placed, and very properly, under the State Board of Agriculture or State University.

"In the event that you are of the opinion that State supervision is a necessary feature of the plan you may adopt, I think the Fish Commission is the proper body to take charge of the matter, and, in fact, the President of the Board of Forestry has suggested this course to me."

In accordance with this recommendation an act abolishing the State Board of Forestry was approved March 23, 1893.

Thus did the California State Board of Forestry, first State forestry organization in the United States designed as a permanent part of a State government, come to an end. What had started as a long-time institution fell apart in the maw of political intrigue and scandal.

Not until 1903 did public sentiment express a desire to have control exercised over the very important lumber lands and industry. In the interim between 1893 and 1903, rapid development was made in the lumber industry in California and the bulk of State forest possessions were disposed of by sale of school lands at the ridiculously low price of \$1.25 per acre.

Reflecting public opinion, the legislature in 1903 provided for a thorough investigation of the State's forest resources, the work to be done by the then U. S. Bureau of Forestry, the expense to be shared by the State and Federal governments. Begun July 1, 1903, the work lasted until 1907, including an examination of 21 million acres of forest and brush land, with preparation of a forest map of the State. Shown on the map was extent and location of commercial forest, woodlands and brush lands.

An investigation was made of amount and character of delinquent tax lands, resulting in a recommendation that a system of exchange be promulgated between national and state governments, wherein the state could consolidate its holdings, and if desired, establish state forests.

As a result of these investigations a bill formulating a state forest policy was submitted to the 1905 Legislature, being adopted March 18, 1905.

Echoes of the former forestry scandal were heard in strenuous opposition to the bill, but passage was secured through the personal efforts of Governor George C. Pardee, an ardent proponent of forestry. Destructive amendments eliminated many of the protective features, such as an appropriation for state rangers and fire suppression, but the bill did create a State Board of Forestry and the office of State Forester. The Board was ex-officio, consisting of the Governor, Secretary of State, Attorney General and the State Forester.

First State Forester was E. T. Allen, appointed by Governor Pardee on July 12, 1905. On February 1 of the same year, the U. S. Forest Service was established and placed in charge of the national forests.

A program of education, rather than law enforcement, was emphasized by Forester Allen in an attempt to make the public realize the damage done by forest fires. Allen also endeavored to enlist county support and cooperation of the Water and Forest Association in fire suppression education. Santa Cruz County was first to respond, was followed by four other counties, who offered their support by June 30, 1906, at which time Allen resigned as State Forester.

Successor to Allen was G. B. Lull, who devoted much effort towards county cooperation. County supervisors appropriated amounts varying from \$500 to \$1,000, depending upon size and financial condition of the county. These amounts allowed payment of 25 to 30 cents per hour to firefighters for actual time spent suppressing fires. Appointments as fire wardens were recommended by county supervisors and acted upon by the State Forester.

This system proved unsatisfactory, however, for the State Forester had little or no control over it, and although ten counties appropriated sums for payment of wardens, there was poor organization.

By 1908 Lull had appointed 721 voluntary firewardens, 269 of whom were employed by the U. S. Forest Service. The Forester advocated sharing of salary expenses by counties on a 50-50 basis, which would have entailed a State expenditure of approximately \$15,000 a year. Total appropriation for the biennium was only \$22,100.

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In his report the State Forester devoted considerable attention to the California Redwood Park, Santa Cruz County (now a part of the State Park System), then under his supervision. About 28 miles of fire lanes, 30 to 60 feet wide, were constructed encircling the park.

Lull resigned in 1909, and in 1910 G. M. Homans was appointed State Forester by Governor Hiram Johnson.

Homans' biennial report for 1910 started with an argument to show why the biennial appropriation for his office should be increased from \$40,300 to \$126,000. Although unable to finance any State rangers, Homans secured enough funds to employ two technically trained men to make cut-over land and mill studies.

In his 1912 report Homans again launched a campaign for more funds, especially for forest protection purposes. He stated: "State patrols should be supplemented by private associations of timber owners and by the several counties through their respective boards of supervisors."

Division of California into 30 districts was advocated by Homans, who proposed placing a paid patrolman in charge of each district. His total requested increase for the biennium was \$154,600, which included rangers' salaries and expenses, suppression funds and purchase of 160 acres of cut-over land on which practical methods of reforestation could be worked out.

In 1912 an effort was made to have California qualify for an allotment under the Weeks Law. This law was enacted by the federal government in 1911 and established two principles: 1) that of purchase of private lands for incorporation into the national forests, and 2) financial assistance to states in fire control. This was the beginning of direct financial cooperation by the federal government in management of state and private forest properties.

Although California had had a State Board of Forestry and a State Forester for several years, no State funds had ever been set up specifically for forest protection. Certain private land owners spent considerable sums for protection, and some counties had more or less efficient fire control organizations, while the State did what it could.

Two forestry bills providing funds for a fire organization were introduced in the 1913 session of the legislature, but because of conflict between proponents of both measures, they failed to become law. A sum of \$50,000 was granted for forest protection, but defeat of the bill providing for its expenditure rendered this money unavailable. The 1915 legislature did nothing for forestry except increase the appropriation \$2,000 over that of the preceding biennium, making a total of \$45,800.

Forestry matters lagged until 1919, when a appropriation of \$25,000 was secured for the biennium to establish a fire-fighting organization. The evident possibility of enemy sabotage by fire during the first World War had emphasized the need for fire protection. Authority was given to enter into agreements with representatives of the Federal government, counties, municipalities, or individuals.

More authority was also delegated to the State Forester for enforcement of the fire laws and a Board of Forestry set up, consisting of five members: one from the grain and hay industry, one from the timber industry, one from the livestock industry, one at large, and the State Forester. This board superseded the ex-officio board in force up to that time, which rarely held a meeting.

Expansion of State forestry work was hastened by appointment of Dr. George C. Pardee as new chairman of the Board of Forestry. One of the first activities of the board was a joint meeting between the board and lumbermen of the State. Slash disposal was considered at the meeting, resulting in signed agreements with 260 operators to dispose of their slash in such a manner that young growth would be protected after logging.

Strengthened by appropriation of \$25,000 for prevention and suppression of forest fires, the board authorized an agreement with the Federal government, resulting in \$3500 being available under the Weeks Law.

Through combined State and Federal funds the State Forester employed four rangers; one in Shasta County, one for Butte and Yuba counties, one for Placer and Nevada counties, and one for El Dorado, Amador and Calaveras counties. Their period of service was from July 26 to October 15, 1919. In 1920, ten State rangers were hired, and the area under protection increased from 3,500,000 to 8,500,000 acres. Two rangers were also assigned to grain protection in the Sacramento and San Joaquin valleys.

Forestry appropriations were increased to \$75,000 for the 1921 biennium, and with the sum of \$22,750 secured under the Weeks Law, plus \$17,000 from counties and private agencies, the State Forester in 1922 employed 21 rangers, 2 inspectors, 2 men on slash disposal, and 2 lookouts.

The first State lookout was erected on Mount Bielawski, Santa Cruz County, financed largely from funds contributed by Santa Cruz, Santa Clara and San Mateo counties.

Soil erosion and effect of cover on stream flow became an important issue about this time. The State Board of Forestry was directed by the legislature to make an examination of mountain areas being denuded of vegetation and report a reforestation plan to the next session of the legislature. E. N. Munns, forest examiner, presented a comprehensive report to the 1923 legislature in which he stated:

"At least \$75,000 a year should be spent by the State at the present time for fire prevention and suppression, and a definite policy of graduated increases in funds for the gradual expansion of the work to a higher degree of efficiency should be adopted."

State parks were under supervision of the State Board of Forestry at that time, and when the State park movement experienced a sudden revival in 1921 through efforts of the Save-the-Redwoods League, Board Member Solon H. Williams was instructed to negotiate for redwood lands lying along the redwood highway.

State Forester Homans died in 1921 and Merritt B. Pratt, Deputy State Forester since February 1, 1918, was appointed Homans' successor in November, 1921, by Governor Stephens.

It was not until the end of 1926, due to an administration unfriendly to forestry, that the State Forester was able to increase his force by ten men. The number of cooperating counties was raised from 12 to 21.

During the Friend W. Richardson administration an enabling act was passed permitting a constitutional amendment relating to non-payment of taxes on growing timber up to 40 years of age, to appear on the ballot. It was adopted by an overwhelming majority.

After a lapse of four years, in 1927 Dr. Pardee was again appointed chairman of the Board of Forestry and immediately stimulated the board appointed by Governor C. C. Young to put forth valiant efforts along forestry lines. This board, led by Dr. Pardee, so besieged the Department of Finance and the Governor, that a greater percentage increase was given to the forestry budget than to that of any other State agency. County appropriations increased, a number of new counties sought State fire protection supervision and the Federal government gradually increased its Clarke-McNary funds.

Under Section 2 of the Clarke-McNary Act (Federal) funds are provided in cooperation with the states for the protection of timber and watershed areas. California now receives an amount larger than that of any other state in the Union due to the amount of the expenditures that it makes for forest protection purposes. In the fiscal year beginning July 1, 1943, the total budget of the State Division of Forestry including State, Federal and cooperative County funds, was approximately \$4,000,000.

In 1927 under the C. C. Young administration, California's wandering commission and board system of government was reorganized into the cabinet system. The Division of Forestry was created as a part of the Department of Natural Resources.

Under the new set-up the State Forester ceased to be a member of the State Board of Forestry, acting instead as its administrative officer. The number of board members was increased from five to seven, one being familiar with the pine industry, one with the redwood industry, one with the livestock industry, one with general agriculture, one with water conservation problems, and two at large.

The State parks were removed from supervision of the State Forester and placed under administration of the newly-created Division of Parks, also a part of the new Department of Natural Resources.

The cream of the timbered school lands were early gobbled up but enough of the "top milk" timber land was found for exchange with the Federal government, to secure a tract of approximately 10,000 acres, known as the La Tour area. This was formerly a part of the Lassen National Forest; contains some 100 million feet of timber, besides large area of brush lands returning to timber. It belongs to the State of California, but is protected from fire by the Division of Forestry.

Included in the State Forest lands are 800 acres in Napa County, a gift to the State from Mr. and Mrs. Anson F. Blake of Piedmont, 140 acres in Amador County and 160 acres in Trinity County.

RURAL FIRE PROTECTION

One of California's most disastrous fires swept through the grain, brush and range areas of the Sacramento Valley in 1927. As a result of the magnitude of the loss, Governor Young called a conference of a group of State officials and representatives of other interested agencies.

From this meeting evolved the Rural Fire Protection Committee, whose mission was to study the situation and make recommendations to prevent recurrence of such widespread damage. On the committee's recommendations funds were allocated for purchase of four heavy duty, specially-designed firefighting trucks. When the equipment was delivered in the spring of 1929 the State's rangers looked more optimistically toward the impending fire season.

With this meagre start towards a mechanized Division, when the State's rangers had but four trucks and volunteer crews to cope with their gigantic task of protecting from fire more than 30-million acres of forest, watershed, grain and range, the Division of Forestry, with 33 of the State's 58 counties cooperating, matured into a highly-trained

organization operating more than 500 vehicles, 250 of them modern fire-fighting trucks.

Since development of the State's firefighting force, fire underwriters have voluntarily lowered insurance premiums in many counties. Ability of the State's forces to prevent and suppress not only forest, but costly structural fires as well, is being demonstrated more fully each year.

At various times the State Forester has been under fire because of his determination to afford protection to valley lands, but to date these lands are being protected in the same manner as timber and watershed lands.

Until but a comparatively few years' ago, men responsible for protection of brush, forest, grass and grain areas faced successive fire hazard periods with nothing more than a shovel, grub hoe, pump-tank or hand extinguisher. After much experimentation with design of trucks and equipment, California's rural firefighting forces developed mobility combined with dependability, safety and convenience.

In 1929-30 a modified crew was established in Tehama. In 1931 in Mendocino one real standby crew was established at Ukiah. By 1932 (the bottom of the depression) they were created from the residue of the labor

Camps, which extended into the CCC in a gradual build up. 1932 was the first season the fire control program was genuinely changed from "emergency pick-up" to real organized crews.

In 1932, the Division took an important administrative step when, with funds made available for the purpose, it adopted the policy of maintaining full time stand-by crews at its various fire suppression stations. Prior to this during emergencies it had been necessary to hire men by the hour to man equipment and fight fires. This method, which forestry technicians described as "putting a premium on fires", had many handicaps.

During "off-season" months the stand-by crews engage in various forestry construction and maintenance projects in their respective patrol areas, effecting an economy in funds that would otherwise have to be spent by the Division for this work.

In cooperation with the U. S. Forest Service, the Division experimented with the airplane in conjunction with forest firefighting. In 1939 the Forest Service leased five airplanes for aerial forest fire control in California's national forests.

However, since airplanes have their main value in transportation of administrative personnel or equipment to fire and for reconnaissance of large fires, the Division of Forestry has not made extensive use of planes for primary detection purposes. Rather, lookout stations on prominent peaks have been developed.

Prior to 1932 the Division maintained thirty lookouts. In that year a very precise survey was conducted by the technical force by which more than 200 potential lookout sites were actually occupied and visible area surrounding each peak mapped.

In the office these visible area maps were compared with fire history records and a selection made of most valuable sites. Thirty additional sites were approved and construction started under the CCC program. Today the Division operates 69 lookout stations.

In 1939 the Board of Forestry appointed a Fire Plan Committee made up of Division personnel familiar with the entire state. This committee was given the task of preparing an "adequate plan" for fire protection on Division lands. The committee prepared "travel-time" charts of existing and recommended crew station sites. All the rangers were called

into conference for local recommendations. The work of the committee was approved by the Board of Forestry and at two regular sessions of the legislature an additional one and one-half million dollars was requested in special bills for development of additional crews according to the plan.

However, the special bills failed in passage in spite of the general endorsement of the plan. But upon the advent of war the pressing need for adequate fire protection brought the full plan into being and now 193 regular State fire crews are in existence.

STATE NURSERY

Established by legislative act of 1917, the California State Nursery has grown thousands of trees to beautify the State's public streets and highways, parks and school grounds, as well as serving as a source of supply for reforestation stock.

For some years there was no charge for trees planted in a public capacity other than transportation costs. Surplus stock was sold to the public for private planting, at a low cost. Many thousands of trees were distributed to farmers for windbreaks, wood lots, shelter belts, etc., at actual cost of production.

In 1933 the legislature prohibited sale of stock raised at the nursery for private planting, stipulating that all stock must be sold at not less than cost of production and for public planting only.

A showplace, the nursery is situated west of the City of Sacramento on the road to Davis, and covers an area of 15-acres. Besides the residence of the nurseryman, a warehouse, garage, helpers' quarters and greenhouse are on the premises. In addition there is a large lathhouse which protects the young seedlings until they are strong enough to be planted in the field.

An important crop of the nursery is the cork oak. Sponsored by a commercial cork company, each year the nurserymen plant thousands of acorns, nurturing the young sprouts until they are ready to be distributed. Distribution is handled through cooperation of the Extension Forester, University of California, who passes upon applicants for trees, ascertaining that they have proper facilities and location for best growth of the oaks.

But while many thousand cork oak trees are grown each year at the nursery, this is by no means the only type of tree handled. From thirty to fifty thousand trees are raised yearly, mostly of the deciduous type, including elms, ash, poplars, oriental planes, fir, spruce and pine.

STATE LABOR CAMPS

The era of prosperity, following World War I spiralled upward until in 1929 it reached its peak and crashed resoundingly, landing the country in a depression which lasted for a decade. California did not feel the full impact of this depression until two or three years after the stock market crash of 1929. By 1931, however, hordes of jobless descended upon the State in such numbers that something had to be done about them.

Jobless men and boys moved from one part of the State to the other, creating relief problems in every section. Finally in 1931 the California State Unemployment Commission recommended a plan to the Governor whereby California and the jobless would both benefit. This plan encompassed State labor camps which would give the men work as well as house, feed and clothe them.

In making its report to Governor James Rolph, Jr., the State Unemployment Commission stated:

"Among the suggestions for emergency unemployment relief that were considered by this Commission was a proposal which came from the Board of Forestry of the State Department of Natural Resources, that our State Government establish camps for single, unemployed men, to be used to construct firebreaks around towns that have been, or may be threatened by forest and brush fires, and in the construction of firebreaks in the foothills and mountainous regions of the State, where it is possible to work during the winter, and where such work will be of the greatest benefit in the protection of important watersheds of the State from destruction by fire."

California set the stage for the nation-wide Civilian Conservation Corps through her State Labor Camps. The obvious success and popularity of camps wherein men and boys could maintain their respectability by earning their way with honest labor, yet accomplish so much good for the commonwealth, convinced national leaders that here was an answer to the pressing problem of unemployed youths and men.

For two years the State Labor Camps wrestled with the administrative and financial problems coincident with such a program. Therefore, when the CCC's were inaugurated, the benefit of California's experience was utilized. California's camps were necessarily limited in scope because of lack of finances. The CCC's broadened the field of the labor camps, benefitting not just the men themselves, but their dependent families, who received allotments from the Corps members' wages.

Twenty-eight forestry and two highway camps were set up in 1931, opening in December and closing in April, 1932. Funds for their operation were secured from the State Division of Highways, the State Emergency Fund, the Reconstruction Finance Corporation and through cooperation of the U. S. Forest Service, the county forestry organizations of Los Angeles and Ventura counties and other agencies throughout the State.

State Forest Rangers were placed in charge of the forestry camps and directed the work projects outlined for each camp.

Success of the first camps in 1931 was so marked that the program was continued until 1933. By April 1, 1933, there were 3304 men in southern California camps and 3880 in northern California, making a total of 7184 men. Altogether, 15643 men passed through the camps in 1933.

Camp members were a motley group, averaging from teen-agers to men past 50, with skills ranging from engineering to watchmaking, truck driving to journalism, laboring to salesmanship. Profession "bums" did not find the camps to their liking and soon spread the word through their ranks that unless a man was willing to work he was not welcome at the camps. Average work day was six hours and an attempt was made to furnish wholesome recreation during time off duty.

While these camps were established to take the relief load off the various counties and municipalities, occasioned principally by migrants, local jobless were allowed to enter the camps. Not more than twenty per cent of the capacity of any camp could be filled by local residents, however.

Outstanding accomplishments of the camps included:

1505 miles of firebreaks, motorways, roads, trails and telephone
lines constructed or cleared
1238 miles of weed clearing on river banks, irrigation ditches
and county roads
837 acres of land cleared
198 campsites prepared
67 buildings constructed or reconditioned
12688 bug trees and snags felled

Total allotment for the camps was \$681,373. This did not include the salaries and expenses of State, Federal and county employees, net out of regular budgets, nor the \$49,428 spent by the U. S. Forest Service for various items and the \$1245 spent by the California Forest Protective Association.

A total of 798,954 man-days were spent in the camps and various warehouses at a cost, in 1933, of \$.5988 a man a day. This covered food, clothing, medical care, tobacco, working tools, camp maintenance and transportation.

CIVILIAN CONSERVATION CORPS

State Forestry in California was greatly benefitted by inception of the Civilian Conservation Corps in 1933. Fire protection afforded the parks and forests was of inestimable value, both in actual saving in fire-fighting costs and in protection of timber.

Boys who had never seen more than a few trees in a city park were turned loose among forest giants beyond their imagination. Firefighting tools were foreign to them; fire breaks and trails unheard of. But only a short time after their arrival in California's vast forest lands, these untrained boys were working like veterans on soil erosion projects; reforestation; firefighting; road-building and trail-making.

Where before it had been necessary to recruit pool hall habitues, bums, or inefficient, indifferent men to help on the firing lines, now there were available trained firefighters in sufficient numbers to be of real assistance to the rangers.

One of the largest projects completed in California by the CCC was Ponderosa Way, a cleared lane 150 to 200 feet wide with a good truck road running its entire length, skirting the edge of the big forests in California. It was so called because of its location between the timber and brush areas at the lower commercial limit of the Western yellow pine, technically known as *Pinus Ponderosa*. Extending for approximately 800 miles, Ponderosa Way reached from the Pit River, Shasta County, in the north, to Sequoia National Forest, Tulare County, in the south.

As a result of the efforts of the CCC, firefighting costs of the Federal Government and the State were about one-half of normal during the term of the Corps. Acreage burned showed a decided decrease.

Among the projects completed for the Division of Forestry by the CCC were: 2019 miles of telephone line installed; 1163 fire breaks completed; 92 lookout houses and towers constructed; 166 dwellings, offices and barns erected; 3432 miles of roads and trails constructed; 284,734 acres of land protected against insects and pests; 962,790 acres protected in rodent control. This much had been completed in California up to September 1934. In addition to this, 236,238 man-days were spent in fighting forest fires.

With the coming of the National Emergency and World War II, enrollment in the Corps dropped rapidly, available men finding work in defense projects, or joining the armed forces. But the work they did will live on many years, a pulsing, thriving example in terms of living forests where might now be only charred ruins, eroded soil, and denuded hills.

LAW ENFORCEMENT

Human nature being what it is, with haloes conspicuous by their absence, the Division of Forestry in 1931 bowed to the inevitable and admitted that law enforcement is an important part of any protective program. First investigator employed by the Division was Horace Kennedy, former police official. For some years Kennedy handled the work alone until in 1940 two more trained investigators were assigned to the work.

With the change-over into a district system, an investigator for each district is being obtained, thus enlarging the program and providing more complete protection to the State as a whole.

The field covered by these investigators is a broad one, entailing theft cases of Forestry property; investigation of fatal accidents and violations of State or Federal fire laws. Close cooperation is maintained with city and county law enforcement agencies, the Federal Bureau of Investigation, Army, Navy and Coast Guard personnel regarding fires.

After a case is made the investigators carry it through court. When convictions are obtained the sheriff or U. S. Marshall takes over the prisoner for transportation to jails or prisons. Often the court assesses fines in lieu of jail sentences, although jail terms are not unfamiliar to the "fire bug".

As a typical year, in 1942 the investigators handled 362 cases, collecting fines totalling \$1670; suppression costs, \$4,767.98 (these are turned over to the Division). Jail sentences totalled 1399 days; unregistered aliens turned over to the FBI, 4; juvenile cases, 11.

Railroad cases, wherein fires have been started due to carelessness of railroad crews in burning alongside tracks, totalled 106, with total amount billed to railroads, \$12,108.50.

ENGINEERING AND FORESTRY

Not until 1934, during the era of the Civilian Conservation Corps, did engineering enter the forestry picture. In that year it was found necessary to have one engineer for each camp.

Advance planning has always been a factor in the engineering work of the Division. First a five-year plan was submitted; revised to a six-year plan and finally to a ten-year plan contemplating work aggregating \$25,000,000. A system of records of surveys, properties, deeds, leases, rights-of-way and standardization of plans for both buildings and administrative sites landscaping has been put into effect.

The Division's telephone lines, roads and firebreaks will, under this program, be correctly surveyed, covered by rights-of-way and delineated for permanent records. More than one hundred field books of actual surveys have been indexed by the engineers. In development is a systematic building maintenance plan, with adequate operating facilities for each Forestry station.

In 1943 the Division had 186 properties such as stations and lookouts; 3000 rights-of-way covering 1371 miles of road, 61 bridges, 2600 miles telephone line, 1333 sanitary units--sewage disposal plants, etc. Still to be obtained are two thousand rights-of-way covering essential fire-fighting truck trails necessary to Division employees.

Forestry engineering covers a rather broad field of specialized technical subjects besides just surveying and construction, since the purely engineering work must be gauged to the highly specialized application of technical forestry.

The forester, for instance, may desire a road in some strategic location for firefighting or forest maintenance purposes when ordinary engineering economic studies would be useless. Or land may have to be selected dependent upon fire frequency and transportation studies which are made not to fit a "desirable location" but to suit the requirements of technical forestry.

Many unusual factors are involved when selecting the location for either road, telephone line, firebreak or buildings. The Division's engineer has devoted much study to this phase of his work, committing what would appear to be engineering "sins" in order to adjust his technique to the specific requirements of the forester; sins which time shows were necessary for best results.

Close liaison between engineering and the State's Department of Finance legal department has been most essential. Every detail requiring legal advice or attention is discussed with this department to preclude long and involved litigations which might otherwise arise.

COMMUNICATIONS

Experiments conducted by the Division in 1937 led to a much needed factor in suppression service--two-way, short wave radio communication. Aided by a central fire dispatching system and other improved facilities, the Division's forces materially reduced the time required in reaching a fire, thus being able to check hundred of blazes before great damage was done.

Before any actual suppression activities can be brought into play, two things must have happened in the business of forest fire fighting.

The fire must have been detected, and communication must have been established with the agency responsible for its suppression. Without detection, there is no need for communication; without communication, detection would matter not at all.

Keeping pace with world progress, the Division of Forestry discarded early-day methods and as radio stepped to the fore in the communications system, more and more transmitting and receiving sets were put into operation.

Today the Division has more than 200 transmitting stations located throughout California, ranging in power from two watts to 500. These are supplemented by ultra-high and medium frequency mobile transmitting units installed in Division automotive equipment, providing rapid and efficient means of communication at scenes of fires.

The popular "walkie-talkie" so closely associated with World War II has proven a valuable aid in the Division's work. These portable units make it possible for a man to investigate a fire and report its condition immediately to headquarters without waiting to reach a telephone or send a messenger. Thus potentially dangerous fires often may be extinguished after only minor damage.

The portable field units are contained in a box slightly larger than a suitcase; transmit 200 miles during the day under favorable conditions; ordinary carrying power, 75 to 80 miles. Each unit carries its own batteries, antennae and other equipment necessary to set up a receiving or transmitting station. Auxiliary batteries and antennae are included.

While these portable units transmit messages, or receive them, at distances of 75 to 80 miles, it frequently is necessary to investigate fires where it is not practical or feasible to set up the field set. In these instances, the small "walkie-talkie" carried in the field unit is utilized. Weighing only 22 pounds these smaller sets can be carried on a man's back and are capable of sending and receiving messages at a distance of approximately 12 to 15 miles.

Complete coverage of the State by radio is possible in a matter of minutes. Should one of the permanent stations be put out of order, the mobile units in time of emergency could transmit messages from one to the other, thus affording a measure of security in case of catastrophe or invasion by an enemy.

Five-hundred watt stations are located at Division of Forestry headquarters in La Mesa, San Diego County; Bakersfield, Kern County; and San Bernardino, San Bernardino County. A similar station is planned for Sacramento, Division headquarters.

All messages are edited by the operators before transmission. With the exception of the larger stations, forestry personnel holding restricted radio telephone operators' permits operate the equipment.

More than 2000 miles of State-owned forestry telephone lines are still very much in existence and constantly used, but gradually radio is taking over the burden of communications. The foresters of the future will no doubt regard our present-day radio system as being as archaic as we consider the crank-type telephone. Television probably will be so prevalent that the ranger at headquarters can direct the men at the fire just by watching the screen.

A central dispatching system is now maintained in the Division headquarters at Sacramento. During periods of emergency 24-hour service is maintained, making all forestry points available by radio at all times.

During World War II the Division is maintaining aircraft warning lookout stations in conjunction with the Federal Government, thereby serving two causes. The stations are able to report fires occurring in their districts as well as spot enemy aircraft. Location of these stations is not revealed to the public, being regarded as military information.

State Forester M. B. Pratt

Directing the activities of the Division of Forestry since 1921, State Forester Merritt B. Pratt had been forester and teacher prior to that time. Born in Paw Paw, Illinois in 1878, Pratt came to California in 1905 as Forest Assistant for the United States Forest Service, then in its infancy.

From 1905 to 1914 Pratt was connected with the U. S. Forest Service. In 1914 he was appointed Assistant Professor of Forestry, University of California, which position he held until 1918, at which time he became associated with the State Division of Forestry as Assistant State Forester. He served in this capacity until November, 1921, when he was appointed State Forester, upon the death of G. M. Homans.

For many years a political appointee, Pratt was under almost constant fire by factions anxious to replace him with some favored political figure of the moment. In 1938 the position of State Forester was declared to be civil service, thus ending the controversies present with each change in administration.

Pratt, author of "Shade and Ornamental Trees of California", is also a Past President of the Association of State Foresters, and Senior Member, Society of American Foresters.

Married, Pratt has two daughters, three grandchildren.